

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-14. (Canceled).

15. (New) A gas sensor for detecting a gas component in the exhaust gas of an internal combustion engine, comprising:

a control and evaluation unit, and

a sensor unit with an electrode structure, a first terminal, and a second terminal,

wherein an electrical measured value present between the first terminal and the second terminal of the electrode structure is adapted to be supplied to the control and evaluation unit to determine the concentration of the gas component,

wherein the control and evaluation unit applies a bias voltage to at least one of the first terminal and the second terminal of the electrode structure,

wherein the bias voltage has a level which is settable in dependence on at least one of a characteristic of the sensor and a loading of the sensor in such a way that sensor behavior with long-term stability is achieved over the operating time.

16. (New) The gas sensor as claimed in claim 15, wherein the level of the bias voltage can be set in dependence on a reference value of the measured value.

17. (New) The gas sensor as claimed in claim 15, wherein the level of the bias voltage can be set in dependence on a sensitivity of the sensor unit.

18. (New) The gas sensor as claimed in claim 15, wherein the level of the bias voltage can be set in dependence on an electrical reference variable that can be measured between the electrode structure of the sensor unit and a circuit of the gas sensor.

19. (New) The gas sensor as claimed in claim 18, further comprising a circuit for temperature measurement covered by an insulating layer, wherein the sensor unit is applied to the insulating layer, and wherein it is possible for the level of the bias voltage to be set in dependence on an electrical reference variable measurable between the electrode structure of the sensor unit and the circuit for temperature measurement.

20. (New) The gas sensor as claimed in claim 15, wherein the level of the bias voltage can be set in dependence on the operating time of the gas sensor.

21. (New) The gas sensor as claimed in claim 15, wherein the bias voltage has a positive polarity in relation to an operating voltage of a circuit of the exhaust gas sensor.

22. (New) The gas sensor as claimed in claim 15, wherein the gas component sensed is ammonia.

23. (New) The gas sensor as claimed in claim 15, wherein said stability is stability with respect to at least one of a zero-point signal and sensitivity.

24. (New) The gas sensor as claimed in claim 16, wherein the level of the bias voltage can be set in dependence on a sensitivity of the sensor unit.

25. (New) The gas sensor as claimed in claim 16, wherein the level of the bias voltage can be set in dependence on an electrical reference variable that can be measured between the electrode structure of the sensor unit and a circuit of the gas sensor.

26. (New) The gas sensor as claimed in claim 17, wherein the level of the bias voltage can be set in dependence on an electrical reference variable that can be measured between the electrode structure of the sensor unit and a circuit of the gas sensor.

27. (New) The gas sensor as claimed in claim 16, wherein the bias voltage has a positive polarity in relation to an operating voltage of a circuit of the exhaust gas sensor.

28. (New) The gas sensor as claimed in claim 16, wherein the gas component sensed is ammonia.

29. (New) A method for operating an exhaust gas sensor to determine a concentration of a gas component in exhaust gas of an internal combustion engine, the exhaust gas sensor including a gas-sensitive sensor unit with an electrode structure with a first terminal and a second terminal, an electrical measured variable correlating with the concentration of the gas component being picked up between the first terminal and the second terminal of the electrode structure, comprising:

applying a bias voltage to at least one of the first and second terminals of the electrode structure,

setting a level of the bias voltage in dependence on at least one of a characteristic of the sensor and a loading of the sensor in such a way that sensor behavior with long-term sensor stability is achieved over an operating time.

30. (New) The method as claimed in claim 29, wherein the level of the bias voltage is set in dependence on a zero-point drift of the electrical measured variable.

31. (New) The method as claimed in claim 29, wherein the level of the bias voltage is set in dependence on a sensitivity drift of the exhaust gas sensor.

32. (New) The method as claimed in claim 29, wherein the level of the bias voltage is set at predeterminable points in time.

33. (New) The method as claimed in claim 29, wherein the level of the bias voltage is set every nth time the exhaust gas sensor is switched on.

34. (New) The method as claimed in claim 29, wherein the bias voltage is set positively in relation to an operating voltage of a circuit of the exhaust gas sensor that is electrically insulated from the sensor unit.

35. (New) The method as claimed in claim 29, wherein said stability is stability with respect to at least one of a zero-point signal and sensitivity.